

CLAIMS

What is claimed is:

1. A purified, isolated polynucleotide encoding the human chitinase amino acid sequence of SEQ ID NO: 2.
2. The polynucleotide of claim 1 which is a DNA.
3. The DNA of claim 2 comprising the protein coding nucleotides of SEQ ID NO: 1.
4. A purified, isolated polynucleotide encoding amino acids 1 to 445 of SEQ ID NO: 2.
5. The polynucleotide of claim 4 which is a DNA.
6. The DNA of claim 5 comprising nucleotides 65 to 1402 of SEQ ID NO: 1.
7. A purified, isolated polynucleotide encoding the human chitinase amino acid sequence of SEQ ID NO: 4.
8. The polynucleotide of claim 7 which is a DNA.
9. The DNA of claim 8 comprising the protein coding nucleotides of SEQ ID NO: 3.
10. A purified, isolated polynucleotide encoding amino acids 1 to 445 of SEQ ID NO: 4.
11. The polynucleotide of claim 10 which is a DNA.

08653618-082896

12. The DNA of claim 11 comprising nucleotides 90 to 1427 of SEQ ID NO: 3.

13. A purified, isolated ^{human} polynucleotide encoding human chitinase selected from the group consisting of:

(a) a double-stranded DNA comprising the protein coding portions of the sequence set out in SEQ ID NO: 1;

(b) a DNA which hybridizes under stringent conditions to a non-coding strand of the DNA of (a); and

(c) a DNA which, but for the redundancy of the genetic code, would hybridize under stringent conditions to a non-coding strand of DNA sequence of (a) or (b).

14. The polynucleotide of claim 13 which is a DNA.

15. A vector comprising the DNA of claim 2, 3, 5, 6, 8, 9, 11, 12, or 14.

16. The vector of claim 15 that is an expression vector, wherein the DNA is operatively linked to an expression control DNA sequence.

17. A host cell stably transformed or transfected with the DNA of claim 2, 3, 5, 6, 8, 9, 11, 12, or 14 in a manner allowing the expression in said host cell of human chitinase.

18. A method for producing human chitinase comprising culturing the host cell of claim 17 in a nutrient medium and isolating human chitinase from said host cell or said nutrient medium.

19. A purified, isolated polypeptide produced by the method of claim 18.

08663618-082896

a

20. A purified, isolated polypeptide comprising the human chitinase amino acid sequence of SEQ ID NO: 2.

21. A purified, isolated polypeptide comprising the human chitinase amino acid sequence of SEQ ID NO: 4.

22. A purified, isolated polypeptide comprising human chitinase amino acids 1 to 445 of SEQ ID NO: 2.

23. A purified, isolated polypeptide comprising human chitinase amino acids 1 to 445 of SEQ ID NO: 4.

24. A human chitinase fragment lacking from 1 to about 72 C-terminal amino acid residues of mature human chitinase

25. The human chitinase fragment of SEQ ID NO: 14.

26. A purified, isolated polynucleotide comprising a polynucleotide sequence encoding the amino acid sequence of SEQ ID NO: 14.

27. The polynucleotide of claim 26 which is a DNA.

28. The human chitinase analog of SEQ ID NO: 15.

29. A purified, isolated polynucleotide encoding the amino acid sequence of SEQ ID NO: 15.

30. A hybridoma cell line producing a monoclonal antibody that is specifically reactive with the polypeptide of claims 19, 20, 21, 22, 23 or 28.

31. The monoclonal antibody produced by the hybridoma of claim 30.

08663618-082896